

Reports for December, 1920, have not been received from the following stations:

HAWAII. U. S. C. & G. S. Magnetic Observatory, Honolulu.
 KANSAS. University of Kansas, Lawrence.
 MASSACHUSETTS. Harvard University, Cambridge.
 MISSOURI. St. Louis University, St. Louis.
 NEW YORK. Canisius College, Buffalo; Cornell University, Ithaca; Fordham University, New York.
 PORTO RICO. U. S. C. & G. S. Magnetic Observatory, Vieques.

SEISMOLOGICAL DISPATCHES RECEIVED AT THE SEISMOLOGICAL STATION, GEORGETOWN UNIVERSITY, WASHINGTON, D. C.

[Associated Press.]

Avlona, Albania, December 5, 1920.—An earthquake occurred in the Tepeleni district to the southwest of this city to-day, rendering 15,000 persons homeless.

The Asama-Yama volcano, situated 90 miles northwest of Tokyo, has been in eruption for several days. Ashes are falling over a wide area.

Valdivia, Chile, December 14, 1920.—The volcano Lanin is reported to be in a state of eruption.

Valdivia, Chile, December 14, 1920.—According to a traveler from Pucón, an earthquake in the Vallarica district began at 11 p. m., December 13, and lasted three hours. No fatalities reported.

Peking, China, December 16, 1920.—An earthquake was felt here at 8:20 p. m. The earth rocked buildings and created much excitement in the hotels and clubs.

Santiago, Chile, December 17.—A dispatch from Pucón, Province of Valdivia, states that the volcano Villarica is still discharging flame and lava and that earth tremors continue.

Santiago, Chile, December 17, 1920.—Strong earthquakes were felt at Mendoza, Argentina, at 2:57 o'clock this afternoon. They were repeated at 3:29 o'clock according to a dispatch received here. No casualties reported.

Paris, December 17, 1920.—Two violent earthquakes visited Algiers, each lasting several seconds.

Rome, December 18, 1920.—New earthquake shocks have completed the destruction of the village of Tepeleni. Twenty persons are reported killed.

Buenos Aires, Argentina, December 18, 1920.—One hundred and fifty persons are reported as killed in an earthquake which occurred yesterday afternoon in the village of La Valle, Province of Mendoza. La Valle was apparently the center of the disturbance. Houses collapsed and crevices were opened in the streets through which hot water gushed forth.

Buenos Aires, Argentina, December 18, 1920.—Minor shocks continue throughout the district, one particularly strong tremor being felt yesterday afternoon at 5:30 o'clock in the towns of San Martin and Rivadavia.

Brindisi, Italy, December 19, 1920.—Advices from Saseno give details of the earthquake which occurred concurrently with the earthquake shocks signaled in America. A number of houses disappeared in a great landslide. Thirty deaths are reported.

Buenos Aires, Argentina, December 20, 1920.—Earth tremors occurred again to-day.

Tokyo, Japan, December 20, 1920.—A wireless message from the island of Yap to-day announces that the most violent earthquake shocks occurred in the vicinity of the island, lasting several days.

Tirana, Albania, December 22, 1920.—Forty-two persons were killed, 200 were injured, and 500 made homeless by the recent earthquake in the Tepeleni district, it was learned to-day.

Tokyo, Japan, December 23, 1920.—A Shanghai dispatch to the Ashia Shimbun reports a terrific earthquake in Kan-su Province on December 16, with casualties estimated at 2,000.

Tokyo, Japan, December 23, 1920.—The continued activity of the volcano Asama is causing alarm. Violent explosions occurred in the crater on Wednesday evening and the country for many miles around was strewn with ashes. The towns around the volcano suffered from heavy earthquake shocks and showers of ashes. It is feared that the loss of life is great.

Rockwood, Tenn., December 23, 1920.—An earthquake of considerable violence accompanied by a rumbling sound was felt here and at other towns as far south as Spring City at 2 o'clock this morning.

Buenos Aires, Argentina, December 24, 1920.—A prospector reports that on December 17, the same day the earthquake occurred in Mendoza Province, he was near to Mount Cavalaria. He felt a severe shock lasting 50 minutes which threw him to the ground. Afterwards he discovered a crater emitting incandescent lava, hot water and smoke.

F. A. TONDORF, S. J., Director.

TABLE 3.—Late reports (instrumental).

ALABAMA. Spring Hill College, Mobile.

No earthquakes were recorded at this station during November, 1920.

Date.	Char-acter.	Phase.	Time.	Period T.	Amplitude.		Dis-tance.	Remarks.
					A _E	A _N		

ALASKA. U. S. C. and G. S. Magnetic Observatory, Sitka.

1920.			H. m. s.	Sec.	μ	μ	Km.	
Nov. 16	eN		8 34 32					
	eE		8 37 40					
	FN		8 42 ..					
	FE		8 43 ..					

ARIZONA. U. S. C. and G. S. Magnetic Observatory, Tucson.

1920.			H. m. s.	Sec.	μ	μ	Km.	
Nov. 16	eE		8 45 14					Trace only on Ns.
	eL		8 52 33					
	M		8 54 02	9	30			
	C		8 55 20					
	FE		9 07 ..					

HAWAII. U. S. C. and G. S. Magnetic Observatory, Honolulu.

1920.			H. m. s.	Sec.	μ	μ	Km.	
Nov. 1	e		17 11 12	18				
	L		17 21 36					
	C		17 33 12	18	*700			
	F		17 42 ..	18				
	F		17 51 ..					
6	e		21 33 30					Slight record.
	M1		21 43 00	17	*100			
	M2		21 52 00	17	*100			
	F		22 02 ..					
16	P		8 48 30					Slight record; phases not apparent.
	e		8 53 42					
	M		9 12 30	17	*100			
	F		10 03 ..					
29	P		8 17 18					
	L		8 19 42					
	M		8 20 30	15	*500			
	C		8 26 ..					
	F		8 45 ..					

* Trace amplitude.

MARYLAND. U. S. C. and G. S. Magnetic Observatory, Cheltenham.

1920.			H. m. s.	Sec.	μ	μ	Km.	
Nov. 16	eFN		8 39 05	3				Phases not clearly marked: ePe faint.
	eP		8 39 03					
	eE		8 47 51					
	eL		8 53 41					
	L		8 53 00					
	M		8 53 48			30		
	M		8 53 52		60			
	C		8 55 00					
	F		9 02 00					
	FN		9 05 00					

PORTO RICO. U. S. C. and G. S. Magnetic Observatory, Vieques.

1920.			H. m. s.	Sec.	μ	μ	Km.	
Nov. 4	P		2 12 38					Seems to be near shock.
	eN		2 13 06					
	M		2 13 24		70			
	M		2 13 38			150		
	C		2 16 ..					
	F		2 22 ..					
	FN		2 23 ..					
6	P		10 45 24					Do.
	P		10 45 26					
	L		10 45 52					
	M		10 46 08			400		
	M		10 46 14		120			
	C		10 49 ..					
	F		10 54 ..					
	FN		10 55 ..					